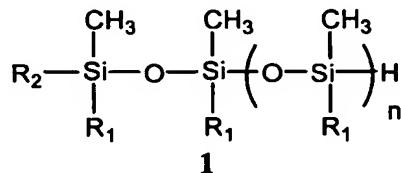


CLAIMS:

1. A process for preparing an α , ω -functional siloxane compound in a purity of greater than or equal to 90%, said process comprising contacting a monohydrosiloxane compound of formula 1



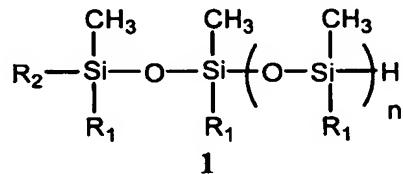
with oxygen in the presence of a platinum group catalyst, without adding water, to form the α , ω -functional siloxane compound in a purity of greater than or equal to 90%;

wherein n is 0, 1, or 2;

R_1 is fluoroethyl, methyl or phenyl; and

R_2 is substituted alkyl, epoxyalkyl, oxetanylalkyl, substituted oxaalkyl, epoxyoxaalkyl, oxetanyloxaalkyl, alkenyl, alkylalkoxysilyl, substituted alkylaryl, and substituted arylalkyl.

2. A process for preparing an α , ω -functional siloxane compound in a purity of greater than or equal to 90%, said process consisting essentially of contacting a monohydrosiloxane compound of formula 1



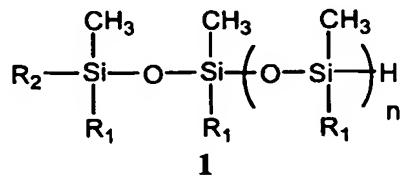
with oxygen in the presence of a platinum group catalyst, without adding water, to form the α , ω -functional siloxane compound in a purity of greater than or equal to 90%;

wherein n is 0, 1, or 2;

R_1 is fluoroethyl, methyl or phenyl; and

R_2 is substituted alkyl, epoxyalkyl, oxetanylalkyl, substituted oxaalkyl, epoxyoxaalkyl, oxetanyloxaalkyl, alkenyl, alkylalkoxysilyl, substituted alkylaryl, and substituted arylalkyl.

3. A process for preparing an α , ω -functional siloxane compound in a purity of greater than or equal to 90%, said process consisting of contacting a monohydrosiloxane compound of formula 1

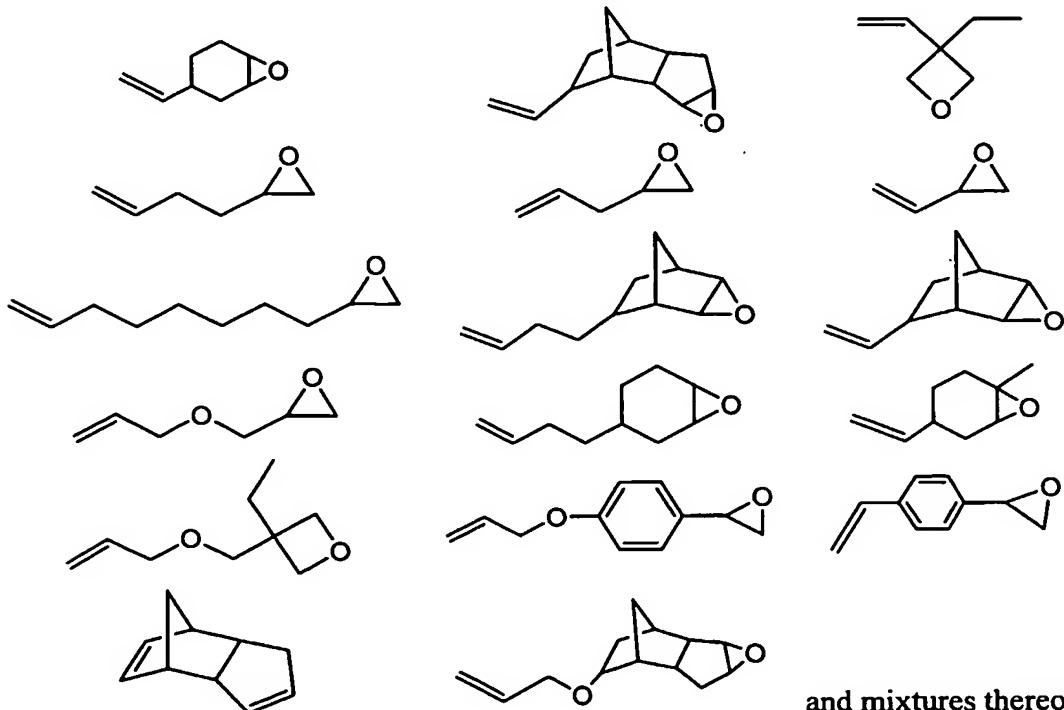


with oxygen in the presence of a platinum group catalyst, without adding water, to form the α , ω -functional siloxane compound in a purity of greater than or equal to 90%; wherein n is 0, 1, or 2;

R_1 is fluoroethyl, methyl or phenyl; and

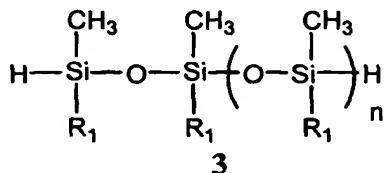
R_2 is substituted alkyl, epoxyalkyl, oxetanylalkyl, substituted oxaalkyl, epoxyoxaalkyl, oxetanyloxaalkyl, alkenyl, alkylalkoxysilyl, substituted alkylaryl, and substituted arylalkyl.

4. A process according to claim 1, wherein R_2 is a residue derived from a vinyl or allyl compound selected from



and mixtures thereof.

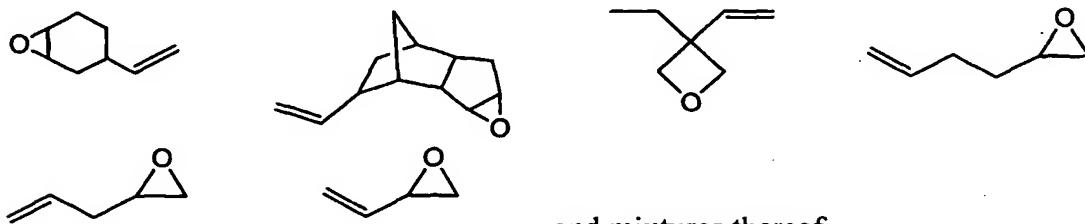
5. A process according to claim 1, wherein the monohydrosiloxane compound is formed by combining the platinum group catalyst, a vinyl or allyl precursor for R₂ and a dihydrosiloxane compound of formula 3, having a purity of greater than or equal to 90%



wherein R₁ is fluoroethyl, methyl or phenyl.

6. A process according to claim 1, wherein the dihydrosiloxane compound and the vinyl or allyl compound are present in a 1:1 ratio on a molar basis.

7. A process according to any of the above claims, wherein R₂ is derivable from a vinyl or allyl compound selected from the group consisting of



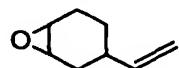
and mixtures thereof.

8. A process according to any of claims 1-4, wherein the vinyl compound is



9. A process according to any of claims 1-4, additionally comprising epoxidizing the α, ω-functional siloxane to form an α, ω-epoxysiloxane.

10. A process according to any of claims 1-4, wherein R₂ is derived from



11. A process according to any of the above claims, wherein R¹ is methyl.

12. A process according to any of the above claims, wherein n is 0.

13. A process according to any of claims 1-4, wherein n is 1.

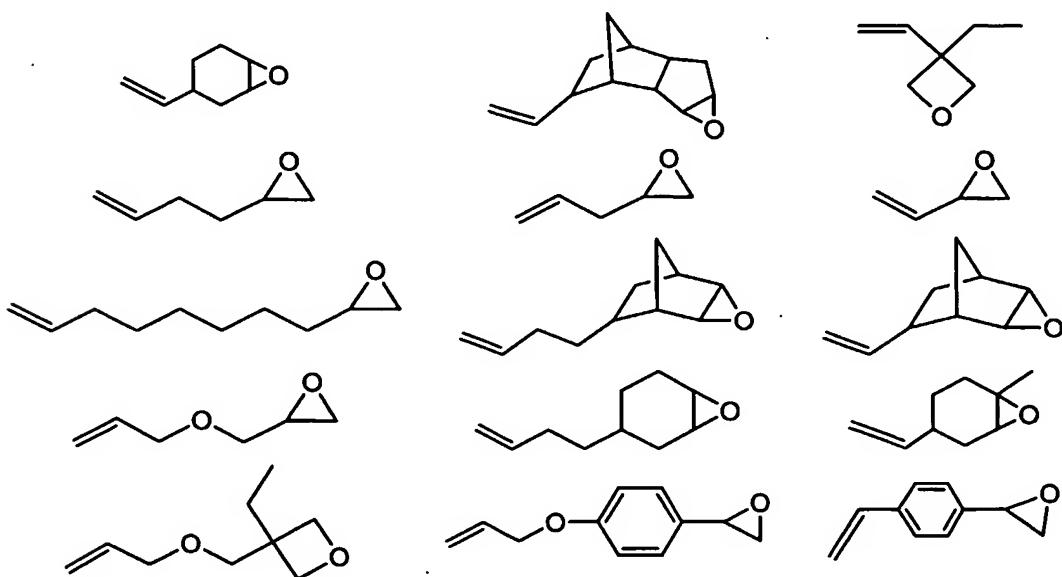
14. A process according to any of claims 1-4, wherein n is 2.
15. A process according to any of claims 1-4, wherein the platinum group catalyst is a rhodium compound.
16. A process according to any of claims 1-12, wherein the metal catalyst is $(Ph_3P)_3RhCl$.
17. A process for preparing a cationically photopolymerizable siloxane oligomer, said process comprising
 - a. combining a platinum group catalyst, a hydrosiloxane compound selected from

4

5

6
 - b. contacting the product with oxygen in the presence of the catalyst to form the cationically photopolymerizable multifunctional siloxane oligomer;
wherein R_1 and R_3 are independently fluoroethyl, methyl or phenyl.

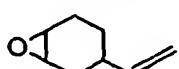
18. A process according to claim 15, wherein the vinyl or allyl compound is selected from





and mixtures thereof.

19. A process according to claim 15, wherein the vinyl or allyl compound is selected from the group consisting of



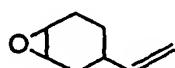
and mixtures thereof.

20. A process according to claim 15, wherein the vinyl compound is



21. A process according to claim 18, additionally comprising epoxidizing the α , ω -functional siloxane to form an α , ω -epoxysiloxane.

22. A process according to claim 15, wherein the vinyl or allyl compound is



23. A process according to any of claims 15-17, wherein R¹ and R₃ are methyl.

24. A process according to any of claims 15-17, wherein the platinum group catalyst is a rhodium compound.

25. A process according to any of claims 15-21, wherein the metal catalyst is

(Ph₃P)₃RhCl.